

KOZLOV, Nikolay Yakovlevich, inzh.; LEVANOV, Nikolay Mikhaylovich, dok.tekhn.nauk, prof.; POLUKHIN, Petr Ivanovich; KRASIL'NIKOV, Aleksey Nikolayevich; PANARIN, Nikolay Yakovlevich; FILIPPOV, Boris Ivanovich; MARTYNOV, A.P., red.; GOROKHOVA, S.S., tekhn.red.

[Technology of the manufacture of vibration rolled elements and their use in the construction industry] Tekhnologiya izgotovleniia vibroprokatnykh konstruksii i ikh primenenie v stroitel'stve. Moskva, Vysshaia shkola, 1963. 310 p. (MIRA 17:4)

1. Nachal'nik Spetsial'nogo konstruktorskogo byuro Prokatdetal' (for Kozlov, Levanov).

KRASIL'NIKOV, A.P., podpolkovnik meditsinskoy sluzhby.

Some problems in the training of military medical personnel. Voen.-  
med. zhur. no.10:64-67 O '55. (MLRA 9:10)  
(MEDICINE--STUDY AND TEACHING)

KRASIL'NIKOV, A.P., podpolkovnik meditsinskoy sluzhby

Military education in military medical schools. Voen-med. zhur.  
no.1:10-13 Ja '56 (MLRA 10:5)

(MEDICINE, MILITARY AND NAVAL, education,  
military educ. in military med. schools) (Rus)

KRASIL'NIKOV, A.P. (Kirov)

"Manual for feldshers at factory health centers." Reviewed by A.P.  
Krasil'nikov. Fel'd.i akush. no.4:59-60 Ap '55. (MIRA 8:7)  
(INDUSTRIAL MEDICINE)

KRASIL'NIKOV, A. P.

KRASIL'NIKOV, A. P. -- "The Sources of Leptospirosis in Belorussia."  
Minsk State Med Institute, Minsk, 1956. (Dissertation for the Degree of  
Candidate of Medical Sciences)

SO: Knizhnaya Lotopis' No 43, October 1956, Moscow

EXCERPTA MEDICA Sec. 17 Vol. 3/11 Public Health Nov. 57

3327. KRASIL'NIKOV A.P. \*The role of farm animals in the infection of man with leptospirosis (Russian text) ZDRAVOOKHRANENIE BELORUSSII 1956, 8 (59-61)

The author carried out a serological examination of cattle and an epidemiological analysis of the incidence of leptospirosis in some districts of the Vitebsk area. The observations showed human infection with leptospirosis to be possible in people caring for affected animals or by the way of water taken from open sources. It is essential to develop measures directed not only against local carriers of leptospirosis (rodents), but also towards prevention of infection of farm animals - another source of this infection.

*KRASIL'NIKOV, A.P.*

EL'BERT, B.Ya., professor, zaslushenny deyatel' nauki; RUBINSHTEYN, I.S., dotsent; SAKOVICH, A.O., dotsent; VILENCHIK G.Yu., kandidat meditsinskikh nauk; GUREVICH, G.TS., kandidat meditsinskikh nauk; IZRAITEL', N.A., kandidat meditsinskikh nauk; KNIGA, A.W., kandidat meditsinskikh nauk; LEVINA, P.I., kandidat meditsinskikh nauk; MARCHENKO, L.O., kandidat meditsinskikh nauk; RABINOVICH, Ye.M., kandidat meditsinskikh nauk; RUBINSHTEYN, B.B., kandidat meditsinskikh nauk; SANOKHINA, Z.F., kandidat meditsinskikh nauk; KRASIL'NIKOV, A.P., kandidat meditsinskikh nauk; ZMUSHEO, L.S., nauchnyy sotrudnik; NISENBAUM, I.M., nauchnyy sotrudnik; SOLOV'YANCHIK, S.I., nauchnyy sotrudnik; SUSLOVA, M.N., nauchnyy sotrudnik; POL'SKIY, S., redaktor; KUPTINA, P., tekhnicheskii redaktor; KALECHITS, G., tekhnicheskii redaktor.

[Practical manual on medical microbiology and bacteriological methods of sanitation research] Prakticheskoe posobie po meditsinskoj mikrobiologii i sanitarno-bakteriologicheskim metodam issledovani. Minsk, Gos.izd-vo BSSR, Redaktsiya nauchno-tekhn. lit-ry, 1957. 356 p. (MLRA 10:6)

(MICROBIOLOGY)

KRASIL'NIKOV, A.P.

Case of isolation of *Leptospira grippotyphosa* from the kidney  
of a mouse. Zdrav.Belor. 3 no.10:70-71 0 '57. (MIRA 13:6)

1. Iz kafedry mikrobiologii Minskogo meditsinskogo instituta  
(zaveduyushchiy kafedroy - professor B.Ya. El'bert) i Instituta  
epidemiologii, mikrobiologii i gigiyeny (direktor - kand.  
med.nauk V.I. Votyakov).

(LEPTOSPIROSIS) (MICE AS CARRIERS OF DISEASE)



KRASIL'NIKOV A.P.

"Data Concerning a Natural Focus of Leptospirosis in the Belorussian SSR," by A. P. Krasil'nikov, Chair of Microbiology, Minsk Medical Institute and Minsk Institute of Epidemiology, Microbiology, and Hygiene, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 28, No 1, Jan 57 pp 51-56

This work concerns a search for sources of leptospirosis among rodents in Mekhovskiy Rayon, Vitebskaya Oblast, Belorussian SSR. It describes the topography and climate of the areas under observation. It notes that two serious outbreaks of leptospirosis, verified serologically by Varfolomeyeva, Dezhurokova, and Krasil'nikov, occurred in this rayon in 1950 and 1953, and that only sporadic cases have been reported since then. On analysis of the territorial distribution of the outbreaks, nine foci were discovered.

The investigations described were conducted from 27 July to 15 September 1954. The following five species of rodents were trapped by the use of Tisheyeva and Gero traps: *Sorex araneus* L, *Clethrionomys glareolus* Schz. *Apodemus sylvaticus* L, *Arvicola terrestris* L, and *Sicista betulina* Pall. After dissection of the animals bacteriological suspensions of the organs were prepared and examined. A table shows that *Leptospira* were not observed in these suspensions.

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Seedlings of the organs were incubated at 20° for 10 days and examined; growth of Leptospira was observed in ten instances. Ten strains of Leptospira were isolated from guinea pigs and young rabbits infected experimentally. Testing of the pathogenicity of the strains isolated revealed that grippotyphosa strain DM-251 was weakly pathogenic for guinea pigs; a 1.5-2 ml dose of Sorex strains (LM-274, OZ-311, OZ-220 VK-1), even after culturing for 3-4 months on artificial culture media, caused the death of from one-fourth to three-fourths of experimental guinea pigs with a resultant pathological-anatomical picture of icterohemorrhagic leptospirosis; a 4-ml dose of strain PM-366 (Monyakov) introduced intraperitoneally killed one out of three guinea pigs with the same pathological-anatomical picture.

Another table shows results of serological investigation of the sera of rodents and insectivores. The article offers the following conclusions on the basis of these and other results.

"1. General infection of animals with leptospirosis in the focus investigated with 19.2% according to serological and 4% according to bacteriological data.

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"2. Eight species of rodents and one species of insectivora were found to be carriers of *Leptospira* in the focus studied. In seven species (*Arvicola Terrestis*, *Clethrionomys tilesius*, *Apodemus sylvaticus* L., *Microtus arvalis* Pall., *Apodemus agrarius* Pall., *Mus musculus* L., and the common shrew), carrying was determined by isolating cultures of *Leptospira*, and in two (*Sicista betulina* Pall. and *Micromys minutus* Pall.), by observing immunobiological shifts in the blood of infected guinea pigs.

"3. Rodents and insectivora of the focus carry *Leptospira* of the grippotyphosa, Monyakov, Sorex, and bataviae types; in addition, antibodies to *Leptospira hebdomadis* were observed in the blood sera of rodents.

"4. The carrying of pathogenic *Leptospira* by *Sicista betulina* Pall. L. grippotyphosa by *Mus musculus* L.; of L. Monyakov, by *Apodemus agrarius* Pall.; and of L. Sorex, by *Arvicola terrestris* L., *Apodemus agrarius* Pall., and *Clethrionomys tilesius* was observed for the first time.

"5. A severe epizootic among the rodents and insectivores of the focus was not accompanied by disease among humans due to the characteristics of the meteorological conditions and farming activities of the people during hay harvesting." (U)

Sum. 1360

KRASIL'NIKOV, A. P.

"Sources of leptospirosis in the BSSR."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists  
and Infectionists, 1959.

KRASIL'NIKOV, A.P.; IZRAITEL', N.A.

Experimental anthrax in irradiated animals. Med.rad. 4  
no.6:56-61 Je '59. (MIRA 12:8)

1. Iz kafedry mikrobiologii (zav. - prof.B.Ya.El'bert) Minskogo  
meditsinskogo instituta.

(ROENTGEN RAYS, eff.

on exper. anthrax (Rus))

(ANTHRAX, exper.

eff. of x-rays (Rus))

KRASIL'NIKOV, A.P.; IZRAYTEL', N.A.

Effectiveness of antibiotic therapy and the prevention of experimental anthrax infection developing on the background of acute radiation sickness. Med. rad. 5 no.9:90 S '60. (MIRA 13:12)  
(RADIATION SICKNESS) (ANTHRAX)  
(ANTIBIOTICS)

IZRAITEL', N.A.; DAVYDOV, O.V.; KRASIL'NIKOV, A.P.

Role of farm animals in the infection of human beings with scleroma.  
Zdrav. Belor. 6 no.4:26-30 Ap '60. (MIRA 14:5)

1. Iz kafedry mikrobiologii (zaveduyushchiy - professor B.Ya.El'bert)  
Minskogo meditsinskogo instituta.  
(RHINOSCLEROMA) (ANIMALS AS CARRIERS OF DISEASE)

KRASIL'NIKOV, A.P.; GRITSKEVICH, A.V.

Anthropurgic foci of leptospirosis in White Russia. Report No.1:  
Leptospirosis hebdomadis in domestic mice. Zhur. mikrobiol. epid.  
i immun. 31 no.6:128-131 Je '60. (MIRA 13:8)

1. Iz Minskogo meditsinskogo instituta i Instituta epidemiologii,  
Mikrobiologii i gigiyeny.  
(WHITE RUSSIA--LEPTOSPIROSIS)  
(RODENTS AS CARRIERS OF DISEASE)



BONDAREVA, Nadezhda Vasil'yevna; KRASIL'NIKOV, A.P., kand. med. nauk, dots., nauchnyy red.; KAPRANOVA, N.V., red.; PSHONIK, B.M., red.; ZIMA, Ye.G., tekhn. red.

[Diseases transmitted to man by animals; an aid for students at popular universities of health] Bolezni, peredaiushchiesia cheloveku ot zhivotnykh; v pomoshch' slushateliam narodnykh universitetov zdorov'ia. Minsk, 1961. 22 p. (Obshchestvo po rasprostraneniuiu politicheskikh i nauchnykh znani Belorusskoi SSR, no.25).

(MIRA 15:2)

(ANIMALS AS CARRIERS OF DISEASE)  
(COMMUNICABLE DISEASES)

EL'BERT, B.Ya.; KRASIL'NIKOV, A.P.; IZRAITEL', N.A.; DAVYDOVA, O.V.;  
PAYASHEYN, B.A.

Investigation of the fishes of the Pripet River Basin as bearers  
of the scleroma bacillus. Zhur. ush., nos. 1 gorl. bol. 21 no.2:  
39-44 Mr-Apr '61. (MIRA 14:6)

1. Kafedra mikrobiologii (zav. - prof. B.Ya.El'bert) Minskogo  
meditsinskogo instituta.  
(RHINOSCLEROMA) (PRIPET RIVER BASIN—FISHES)  
(FISH AS CARRIERS OF DISEASE)

IZRAITEL', N.A., kand.med.nauk; KRASIL'NIKOV, A.P., kand.med.nauk

Action of colimycin and mycerin in experimental scleromatous infection. Zhur.ush., nos.i gorl.bol. 21 no.6:49-55 N-D '61.

(MIRA 15:11)

1. Iz kafedry mikrobiologii (zav. - prof. B.Ya.El'bert) Minskogo meditsinskogo instituta.

(ANTIBIOTICS)

(RHINOSCLEROMA)

IZRAITEL', N.A.; KRASIL'NIKOV, A.P.; FAYNSHTEYN, B.A.; DAVYDOV, O.V.;  
BORTKEVICH, V.S.

Role of a scleroma patient in the distribution of the disease.  
Zhur. ush., nos. i gorl. bol. 23 no.5:43-47 S-0'63  
(MIRA 17:3}

1. Iz kafedry mikrobiologii ( zav. - prof. B.Ya. El'bert)  
Minskogo meditsinskogo instituta.

KRASIL'NIKOV, A.P.; IZRAITEL', N.A.; KRYLOV, I.A.; KLYAVZUNIK, N.Yu.

Reaction of passive hemagglutination in the diagnosis of  
scleroma. Lab. delo no.9:537-539 '64. (MIRA 17:12)

1. Kafedra mikrobiologii (zaveduyushchiy - dotsent A.P.  
Krasil'nikov) Minskogo meditsinskogo instituta.

COUNTRY : ~~USSR~~  
CATEGORY : Farm Animals.  
The Honeybee. Q  
ABS. JOUR. : RZhBiol., No. 6, 1959, No. 25947  
AUTHOR : Kravil'nikov, A. V.  
INST. : ~~USSR~~  
TITLE : Applying Penicillin for the Control of  
European Foul Brood.  
ORIG. PUB. : Pchelovodstvo, 1958, No 7, 51  
ABSTRACT : Three colonies were successfully cured by  
feeding each of them 750 g of syrup (500 g  
of water and 250 g of sugar) containing  
200,000 international units of penicillin for  
a period of 2 days.

Card: 1/1

POLEVODOV, A.P.; DANILIN, V.I.; KRASIL'NIKOV, B.G.; VLASOV, L.G.

Press for determining the volume electric resistance of powders  
at various pressures. Zav. lab. 31 no.11:1417-1418 '65.  
(MIRA 19:1)

KRASIL'NIKOV, B.K., inzh.

Automatic control of the compressed air system on the pusher-tug  
"Boris Lavrenev." Sudostroenie 28 no.7:69-72 J1 '62.  
(Tugboats) (Marine engineering) (MIRA 15:8)



KRASIL'NIKOV, Boris Konstantinovich; MEZHENYIY, Vladimir  
Ivanovich; SILOROV, Vasilii Fedorovich; TSIREKH, M.I.,  
retsensent; FETROV, Yu.P., retsensent; AVANTALIANI, R.Ye.,  
nauchn. red.; NIKITINA, R.D., red.

[Experience in the automation of the control of marine  
diesel engines] Opyt avtomatizatsii upravleniya sudovy-  
mi dizeliami. Leningrad, Sudostroenie, 1965. 177 p.  
(MIRA 18:3)

Translation from: Referativnyy zhurnal, Geologiya, 15-1957-10-13795  
p 58 (USSR) 1957, Nr 10,

AUTHOR:

Krasil'nikov, B. N., Mossakovskiy A. A., Suvorova, V. S.

TITLE:

Structure of the Northern Part of the Minusinsk Basin  
and the Experiment of Applying Some Complex Methods in  
Studying It (Tektonicheskoye stroeniye severnoy chasti  
Minusinskoy kotloviny i opyt primeneniya nekotorykh kom-  
pleksnykh metodov yego izucheniya)

PERIODICAL:

Sov. geologiya, 1955, Nr 42, pp 128-155

ABSTRACT:

The Minusinsk intermontane basin is a steep Hercynian  
structure lying on a Caledonian folded basement. The  
internal structure of the basin is not homogeneous.  
Long east-west spurs of the Eastern Sayan and the Kuz-  
netskiy Alatau divide it into the following smaller ~~spading~~  
(basins) (from south to north): the Southern Minusinsk,  
the Sydo-Yerbinskaya, the Chabakovsko-Balakhtinskaya, and  
the Nazarovskaya. These basins originated at the end of  
the Caledonian stage. The coincidence of the orientation

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of the basins with the direction of the Caledonian structures of  
the basement is attested by several links between individual  
Hercynian structures and Caledonian folds of the basement. A  
distinct influence of pre-Hercynian structure on the development  
of Hercynian features is identified for middle Devonian time,  
when there existed a western and an eastern downwarp in the re-  
gion of the Chebakovsko-Balakhtinskaya and Nazarovskaya basins,  
their position being associated with the structure of the base-  
ment. Thus the western downwarp extends in a direction approxi-  
mately parallel to the anticlinorium of the Kuznetskiy Alatau;  
the eastern parallels the Batenevskiy anticlinorium. The cen-  
tral zone, separating the downwarps, was formed on the site of  
an ancient Caledonian anticlinorium, the remains of which are  
the modern structures in the Solgonskiy ridge and the Kop'yev-  
skoye uplift. A thick sequence of coarse clastics accumulated in  
the downwarps during middle Devonian time, whereas a thin layer  
of fine clastic sediments was deposited on the uplift dividing  
them. At the end of the Eifelian stage there began a gradual

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rearrangement of the pre-Hercynian tectonic pattern, associated with block faulting. Fractures split the Chebakovsko-Balakhtinskaya and Nazarovskaya basins into a system of east-west horst steps (zones), and within these there occur smaller faults which have permitted folding in the covering rocks, a characteristic feature in the Minusinsk basin. The principal faults are aligned with the folds of Caledonian age, revealing a definite genetic relationship between the two. Each basin is a step-like structure, descending from south to north into the central part. The southern border of each block is higher than the northern border; that is, each block is inclined toward the north. Jurassic deposits accumulated on the lowest parts of the blocks (their northern borders), and asymmetrical synclines with steep northern limbs were formed. In the bordering parts of the basin, adjoining the most elevated blocks, box folds developed. Their origin is associated with northeast and northwest faults, emanating from east-west fractures which separate the horst blocks. Northwestern trending flexures are developed in middle and

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upper Paleozoic rocks in the central parts of the basin, separating gently sloping anticlines and the complex limbs of anticlinal folds. The small blocks of the Paleozoic structure do not show in the Mesozoic rocks in the central parts of the basin. Large-scale asymmetrical synclines are characteristic, their axes trending in the same direction as the fault blocks. Folds in the covering rocks in the most elevated blocks agree with the general trend of these zones; they are arched anticlines complicated by block faulting. The development of the principal block-faulted structures originated in late Hercynian time. The methods which were used in preparing a tectonic map for the northern part of the Minusinsk basin are described. Surface geological examination was combined with interpretation of aerial photographs and subsequent visual observation from the air. The study of the relief of the Chebakovsko-Balakhtinskaya basin shows its relation to the structure.

K. A. Klitin

Card 4/4

CHOCHIA, N.G.; BELYAKOVA, Ye.Ye.; BOROVSKAYA, I.S.; VOLKOV, A.M.; GRAYZER, M.I.;  
 IL'INA, Ye.V.; KAZAKOV, I.N.; KIRKINSKAYA, V.N.; KISLYAKOV, V.N.;  
~~KRASIL'NIKOV, B.N.~~; MAYMINA, L.G.; OSIPOVA, N.A.; RADYUKOVICH, L.V.;  
 ROMANOV, F.I.; KULIKOV, M.V., red.; DOLMATOV, P.S., vedushchiy red.;  
 YASHCHURZHINSKAYA, A.B., tekhn. red.

[Geology, and oil and gas potentials of the Minusinsk Lowland]  
 Geologicheskoe stroenie Minusinskikh meshgornykh vpadin i  
 perspektivy ikh nefte-gazonosnosti. Leningrad, Gos. nauchn.  
 tekhn. izd-vo nef. i gorno-toplivnoi lit-ry Leningr. otd-nie,  
 1958. 288 p. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledo-  
 vatel'skii geologorazvedochnyi institut. Trudy, no. 120)

(MIRA 12:5)

(Minusinsk Lowland--Petroleum geology)  
 (Minusinsk Lowland--Gas, Natural--Geology)

AUTHOR: Krasil'nikov, B.N., Mossakovskiy, A. A. SOV-5-58-2-2/43

TITLE: Cover-Type Folds of the Northern Part of the Minusinsk Syncline and Their Relation to the Caledonian Structure (Skladki oblekaniya severnoy chasti Minusinskoy kotloviny i ikh svyaz' s kaledonskimi strukturami)

PERIODICAL: Byulleten' Moskovskogo obshchestva ispytateley prirody - Otdel geologicheskoy, 1958, Nr 2, pp 23-42 (USSR)

ABSTRACT: The studies of many scientists have been devoted to problems concerning the geological structure of the Minusinsk syncline, the tectonic location of which has been explained as an intermountain depression in the fold system of the Altay-Sayan region. Among them are V.A. Obruchev, A.D. Arkhangel'skiy, Ya.S. Edel'shteyn, A.N. Churakov, M.K. Korovin, V.A. Kuznetsov, V.S. Meleshchenko, G.I. Teodorovich, D.V. Obruchev, M.I. Grayzer, D.V. Obruchev, A.N. Sokol'skaya, S.M. Doroshko and Ye.F. Chirkova -Zalesskaya. I.V. Luchitskiy, N.S. Zaytsev, V.S. Meleshchenko and K.D. Klitin dealt with questions of the tectonic structure of the individual depressions of the Minusinsk syncline, the morphology and origin of the structures of the folds, the importance of ruptures and their formation. B.N. Krasil'nikov, A. A. Mossakovskiy, Ye. D. Sulidi-Kondrat'yev

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Relation to the Caledonian Structure

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and N.P. Kheraskov recently studied the deposits of this region dating back to the middle Cambrian period. I.V. Luchitskiy and A.I. Anatoliyeva (1953) devoted their research work to the southern Minusinsk depression. It can be concluded from all the studies that within the Minusinsk syncline the structure of the Caledonian foundation does not differ in principle from the Caledonian structures of its framework (Kuznetskiy Altay, Sayany). In the lower Paleozoic era, the region now occupied by the Minusinsk syncline and its fold framework, consisted of a geosyncline system of inner elevations and depressions, which was transformed at the end of the Caledonian orogenic period into a system of linear anticlinal and synclinal folds. In the Devonian period the Minusinsk syncline developed into a diametrical meridian Caledonian depression. At the beginning of the Hercynian orogenic period the Caledonian foundation was divided by systematic ruptures parallel to the course of the bigger Caledonian folds and acquired a fault-block character. Thus the Caledonian anticlinal zones were transformed into fault-block mountain elevations of a

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horst character, and the synclinal zones into a graben-type depression. All in all, the Minusinsk syncline has a superimposed structure which developed on a complicated Caledonian fold basis. The superimposed character of the Minusinsk syncline did not destroy the structural elements of the Caledonian tectonic surface. They had a considerable influence on the sedimentation process in the Hercynian period and are still reflected today in elevations and depressions of that time. There are 8 charts and 13 Soviet references.

1. Geology--USSR
2. Geological time--Determination
3. Geophysics

Card 3/3



KATS, Ya.G.; KRASIL'NIKOV, B.N.; MOSSAKOVSKIY, A.A.; SULIDI-KONDRAT'YEV,  
Ye.D.; ~~KHERASKOV, N.N.~~

Paleozoic stratigraphy of the Minusinsk Lowland and its marginal  
mountains. Trudy VAGT no.4:99-148 '58. (MIRA 12:6)  
(Minusinsk Lowland--Geology, Stratigraphic)



KRASIL'NIKOV, B.N.; KATS, Ya.G.

Importance of fracturing for oil prospecting and problems  
relative to the oil potential of the Mimusinsk Basin. Izv.  
vys.ucheb.zav.; geol. i razv. 2 no.9:3-19 S '59.

(MIRA 13:4)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze.  
(Mimusinsk Basin--Petroleum geology)  
(Faults(Geology))

BELOSTOTSKIY, I.I.; ZONENSHAYN, L.P.; KRASIL'NIKOV, B.N.; KUDRYAVTSEV, G.A.  
MOSSAKOVSKIY, A.A.; POZHARISKIY, I.F.; KHERASKOV, N.N.

Division of the Altai-Sayan mountainous area into tectonic districts.  
Bul.MOIP.Otd.geol. 34 no.4:150-152 JI-Ag '59. (MIRA 13:8)  
(Altai Mountains--Geology, Structural)  
(Sayan Mountains--Geology, Strudtural)

BELOSTOTSKIY, I.I.; ZONENSHAYN, L.P.; KRASIL'NIKOV, B.N.; KUDRYAVTSEV, G.A.  
MOSSAKOVSKIY, A.A.; POZHARISKIY, I.F.; KHERASKOV, N.N.

Formation and tectonic regions of the Altai-Sayan folded region.  
Bul. MOIP. Otd. geol. 34 no.6:3-22 N-D '59. (MIRA 14:3)  
(Altai Mountains--Folds (Geology))  
(Sayan Mountains--Folds (Geology))

KATS, Ya.G.; KRASIL'NIKOV, B.N.

Structure of the basement of the Agra region of the West Siberian Platform. Izv. vys. ucheb. zav.; geol. i razv. 3 no.6: 28-31 Je '60.  
(MIRA 14:7)

1. Moskovskiy geologorazvedochnyy institut imeni S.Ordzhonikidze.  
(Siberia, Western—Geology, Structural)

KRASIL'NIKOV, B.N.

Relationship between the geosynclinal and orogenic developmental stages of the Sayan-Altai folded region. Geol. i geofiz. no.9: 3-12 '61. (MIRA 14:11)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR  
Novosibirsk.

(Sayan Mountains--Geology, Structural)  
(Altai Mountains--Geology, Structural)

KRASIL'NIKOV, B.N.

Division of Lower- and Middle Cambrian sediments in the eastern  
slope of the Kuznetsk Ala-Tau. Geol. i geofiz. no.1:118-122  
'62. (MIRA 15:4)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.

(Kuznetsk Ala-Tau--Geology, Stratigraphic)



BGATOV, V.I.; BOGOLEPOV, K.V.; KAZARINOV, V.P.; KALUGIN, A.S.; KOSOLOBOV,  
N.I.; KOSYGIN, Yu.A.; KRASIL'NIKOV, B.N.; KRASHOV, V.I.; KUZNETSOV,  
Yu.A.; KUZNETSOV, V.A.; LIZALEK, N.A.; ROSTOVTSEV, N.N.; SAKS, V.N.

In memory of Vadim Sergeevich Meleshchenko. Geol.i geofiz.  
no.2:130-131 '62. (MIRA 15:4)  
(Meleshchenko, Vadim Sergeevich, 1917-1961)

KOSYGIN, Yu.A.; BASHARIN, A.K.; BERZIN, N.A.; VOTAKH, O.A.;  
KRASIL'NIKOV, B.N.; PARFENOV, L.M.

Principal in the structural elements in the Late Pre-Cambrian  
of Siberia. Geol. i geofiz. no.10:68-82 '62. (MIRA 15:12)

1. Institut geologii i geofiziki Sibirskogo otdeleniya  
AN SSSR, Novosibirsk.  
(Siberia—Geology, Structural)

KRASIL'NIKOV, B.N.

~~Pre-Cambrian marginal troughs in Siberia~~

Pre-Cambrian marginal troughs in Siberia. Geol. i geofiz.  
no.5:17-33 '63. (MIRA 16:8)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.

(Siberia—Geology, Structural)

ANATOL'YEVA, A.I.; KRASIL'NIKOV, B.N., otv. red.

[Comparative characteristics of Devonian sediments in the Sayan-Altai fold area] Sravnitel'naia kharakteristika devonskikh otlozhenii Saiano-Altaiskoi skladchatoi oblasti. Moskva, Izd-vo "Nauka," 1964. 122 p.  
(MIRA 17:8)

KOSYGIN, Yu.A.; BIRZIN, N.A.; FRANZ, H. H.; SEDERHOV, L.M.

Relation of the Russian Platform to the perovskite areas in the  
pre-Cambrian. Trudy lab. geol. soker. no. 190111-012 '64

(MIRA 17:8)

KOSYGIN, Yu.A.; BASHARIN, A.K.; BERZIN, N.A.; VOLONTEY, G.M.;  
VOTAKH, O.A.; KRASIL'NIKOV, B.N.; PARFENOV, L.M.;  
SHPAKOVSKAYA, L.I.; ~~red.~~

[Pre-Cambrian tectonics of Siberia] Dokembriiskaya tek-  
tonika Sibiri. Novosibirsk, Red.izd. otdel Sibirskogo  
otd-niia AN SSSR, 1964. 124 p. (MIRA 18:1)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut  
geologii i geofiziki. 2. Chlen-korrespondent AN SSSR  
(for Kosygin).

AFANAS'YEV, Yu.T.; BASHARIN, A.K.; BASHARINA, N.P.; VOTAKH, O.A.; SOLOV'YEV,  
V.A.; KRASIL'NIKOV, B.N., *otv. red.*; PARFENOV, L.M., *otv. red.*

[Materials on tectonic terminology. Part 3..Tectonics and its division.  
Terms on structural geology.] Materialy po tektonicheskoi terminologii.  
Novosibirsk. Pt. 3. Tektonika i ee razdely. Terminy strukturnoi geolo-  
gii. 1964. 255 p. (Its Trudy, no.34) (MIRA 18:4)

ALADYSHKIN, A.S.; VASIL'KOVSKIY, N.P.; VINKMAN, M.K.; GINTSINGER, A.B.;  
GURARI, F.G.; KARPINSKIY, R.B.; KRASIL'NIKOV, B.N.; KRASNOV,  
V.I.; KRIVENKO, A.P.; LUCHITSKIY, I.V.; PAN, F.Ya.; PETROV,  
P.A.; POSPELOV, G.L.; SENNIKOV, V.M.; CHAIRKIN, V.M.;  
SHCHEGLOV, A.P.

In memory of Andrei Aleksandrovich Predtechenski, 1909-  
1964. Geol. i geofiz. no.4:197-199 '65. (MIRA 18:8)



REASHNIKOV, B.S.

Sound waves in air, water and solid bodies. Izd. 2., perer. Moskva, Gos. izdat-  
tekhniko-teoret. lit-ry 1954. 439 p. (55-33087)

QC243.K7 1954

A handwritten signature in dark ink, appearing to be 'P. S. Reashnikov', written diagonally across the page.

1. 1/237-66 EWT(1)/EWP(m)/EWA(d)/ETC(m)-6/EWA(1) WW  
ACC NR AP5024897

UR/0382/65/000/003/0037/0040

AUTHOR: Krasil'nikov, B. Yu.

ORG: None

TITLE: Influence of transverse magnetic field upon convective heat exchange in a conducting fluid flow in a channel

SOURCE: 1,55 Magnitnaya gidrodinamika, no. 3, 1965, 37-40

TOPIC TAGS: magnetohydrodynamic theory, magnetohydrodynamic jet

ABSTRACT: The effect of a transverse magnetic field upon convective heat transfer is considered for the case of a conducting fluid flow in a channel formed by infinite parallel plates. The incompressible fluid is assumed to have a small Prandtl number ( $Pr \ll 1$  - liquid metals and ionized gases); the flow is a stationary turbulent one, with  $Pe_m \ll 1$ ; the heat flow across the channel is assumed known, constant and large relative to the heating by electric currents and by viscous dissipation: these are neglected. The analysis of a similar problem for a stabilized laminar flow had been made but the solution for the turbulent flow is so far known only as a semiempirical generalization approach, which is need of an adequate support by as yet unavailable experimental data. Solution of the present turbulent flow problem is initiated by the Lyon integral relationship (1), published before (Chemical Engineering Progress, 1951 vol. 47, 2, 75), together with expressions (2) and (3) based upon the Loytsyansky lo-

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UDC: 538.4

2

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ACC NR: AP5024897

$$\frac{4}{Nu} = \int_0^1 \frac{(\int_0^1 \omega d\xi)^2}{1 + (Pr/Pr_T)(\mu_T/\mu)} d\xi, \quad (1)$$

$$1 - \frac{\eta}{Re_*} = \frac{d\varphi}{d\eta} f(R_l) + \left(\frac{M}{Re_*}\right)^2 \int_0^\eta (\varphi_{\tau\tau} - \varphi) d\eta, \quad (2)$$

$$\tau = \mu \frac{du}{dy} f(R_l) \quad (3)$$

cality hypothesis. Solutions of (1), utilizing (2) and (3), were obtained on the BESM-2M electronic computer and are shown in fig. 1. Nu denotes heat exchange intensity, M - Hartman's number and  $S=M/Re$  - Steward's number; k is an experimental constant. The results of computations can be represented by expression(4).

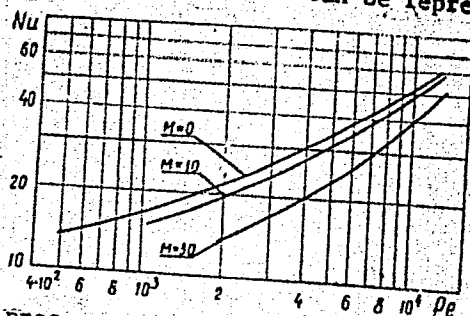


FIG. 1

$$Nu = 10 + 0,025 \left[ Pe \left( \frac{1}{1+kS} \right) \right]^{0,8}, \quad (4)$$

The presence of a magnetic field significantly decreases Nu. Orig.art. has 2 fg., 6 formulas.

SUB CODE: 20

SUBM DATE: 24Nov64/

ORIG REF: 004

Oth REF: 003

Card 2/2

14-57-7-14625  
Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,  
pp 56-57 (USSR)

AUTHOR: Krasil'nikov, D. D.

TITLE: Daily Effect Produced by the Intensity of the Hard  
Component of Cosmic Rays on Overcast and Clear Days  
(Sutochnyy effekt intensivnosti zhestkoy sostavlya-  
yushchey kosmicheskikh luchey v pasmurnyye (!) i  
yasnyye dni)

PERIODICAL: Tr. Yakut. fil. AN SSSR, Ser. fiz., 1955, Nr 1,  
pp 19-22

ABSTRACT: Bibliographic entry  
Card 1/1

14-57-7-14626

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,  
p 57 (USSR)

AUTHORS: Krasil'nikov, D. D., Shafer, Yu. G.

TITLE: Variations in Intensity of the Hard Component of  
Cosmic Rays During the Movement of Air Mass Fronts  
(Variatsii intensivnosti zhestkoy komponenty kosmi-  
cheskikh luchey pri prokhozhdanii frontov vozdushnykh  
mass)

PERIODICAL: Tr. Yakut. fil. AN SSSR, Ser. fiz., 1955, Nr 1,  
pp 33-41

ABSTRACT: Bibliographic entry  
Card 1/1

14-57-7-14620  
Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,  
p 56 (US A)

AUTHORS: Krasil'nikov, D. D., Kuz'min, A. I.

TITLE: Sudden Increases in Cosmic Ray Intensity (Sluchay  
vspyshek v intensivnosti kosmicheskikh luchey)

PERIODICAL: Tr. Yakut. fil. AN SSSR, Ser. fiz., 1955, Nr 1,  
pp 42-47

ABSTRACT: Bibliographic entry  
Card 1/1

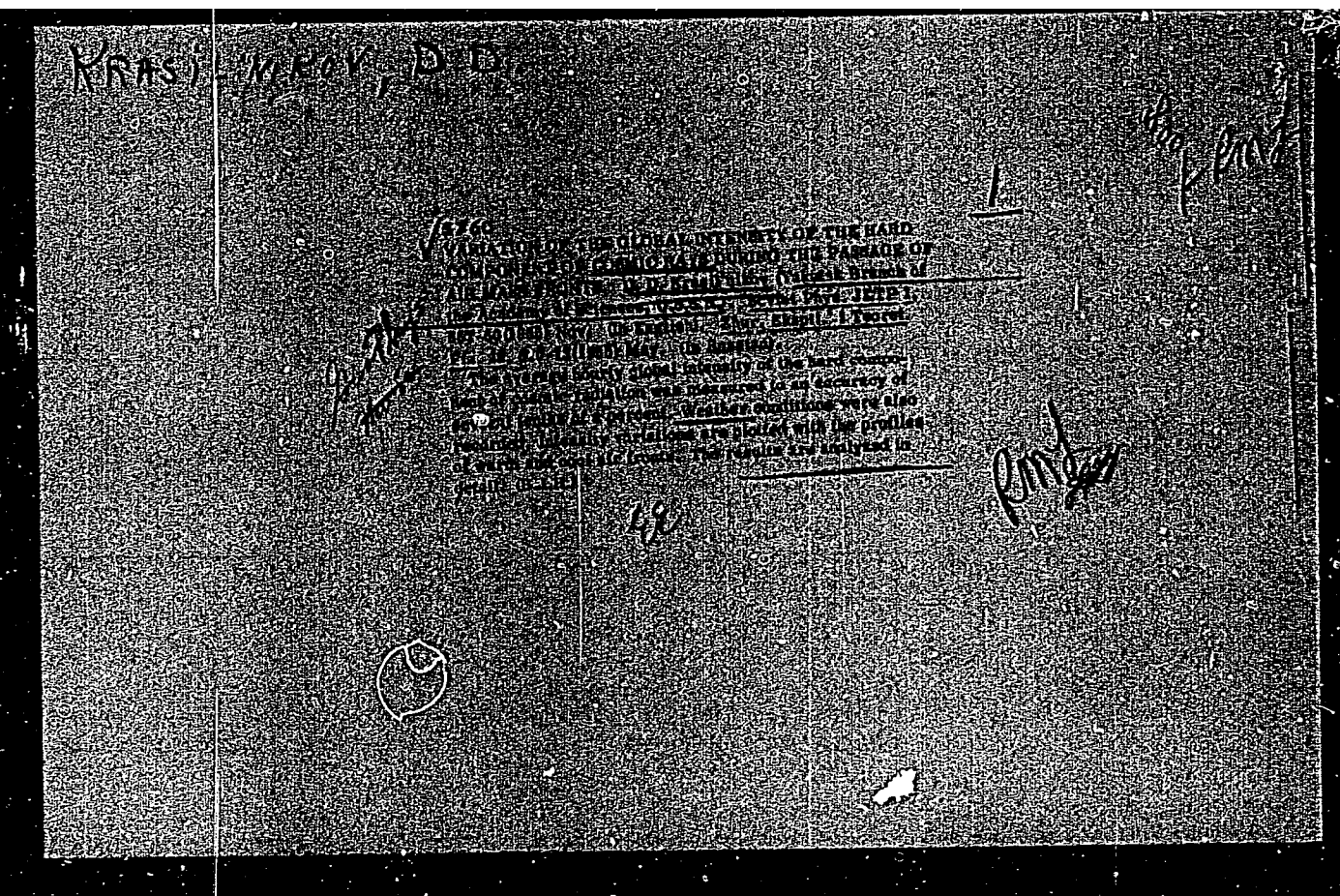
Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,  
p 53 (USSR) 14-57-7-14602

AUTHORS: Krasil'nikov, D. D., Nikol'skiy, S. I.

TITLE: The Spectrum and the Meteorological Effect of Ion  
Impulses (Spektr i meteorologicheskiy effekt ioni-  
zatсионnykh tolchkov)

PERIODICAL: Tr. Yakut. fil. AN SSSR, Ser. fiz., 1955, Nr 1,  
pp 48-54

ABSTRACT: Bibliographic entry  
Card 1/1





KBASIL'NIKOV, D.D.

Spectrum and meteorological effects of ionization impacts. Uch. zap.  
IAk. un. no.1:23-28 '57. (MIRA 11:3)  
(Collisions (Nuclear physics))

KOVAL'SKAYA, A.I.; KRASIL'NIKOV, D.D.; NIKOL'SKIY, S.I.

Preliminary results on barometric and temperature effects caused  
by extensive atmospheric showers near the sea level. Trudy IZAN  
SSSR Ser. fiz. no. 2:88-92 '58. (MIRA 11:7)  
(Cosmic rays) (Atmospheric temperature) (Atmospheric pressure)

AUTHOR: Krasil'nikov, D. D. SOV/56-35-1-49/59

TITLE: The Intensification of the Barometric Effect Caused by the Increase of the Energy of an Extensive Air Shower (Uvelicheniye barometricheskogo effekta s rustom energii shirokogo atmosfernogo liuga)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1956, Vol. 12, No. 1, pp. 286 - 288 [USSR]

ABSTRACT: The time variations of the frequency of extensive air showers were measured in Yakutsk (62° north latitude and 129° east longitude) at an altitude of 100 m above sea level. These measurements were carried out in 2 series between 1954 and 1956. In the first series the triple coincidences of counter groups and the quadruple coincidences below light matter were recorded. The second measuring series was carried out under 2,5 g/cm<sup>2</sup> of light matter. Sixfold and eightfold coincidences were also recorded in the second series. The statistical analysis of the variations of the shower numbers (averaged over 1 day) in connection with the variation of the pressure

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The Intensification of the Barometric Effect Caused by the Increase of the Energy of an Extensive Air Shower SOV/56-35-1-49/59

and temperature values (averaged over 1 day) showed a noticeable increase of the barometric coefficient when the average density of the particles in the recorded showers increases. The partial coefficients of the barometric effect obtained are given in a table. The energy of the primary particles was estimated to amount to  $2 \cdot 10^{15}$  eV. The observed intensification of the barometric effect, which is caused by an increase of the shower energy, may be explained by the hypothesis of Nikol'skiy, Vavilov, and Batov. The author thanks S.I. Nikol'skiy for his discussion of this paper and also N.N. Yefimov, N.P. Yemel'yanov, and T.F. Panfilova for their help in the evaluation of the experimental results. There are 2 figures, 1 table, and 2 references, 1 of which is Soviet.

ASSOCIATION: Yakutskiy filial Akademii nauk SSSR (Yakutsk Branch of the AS USSR)

SUBMITTED: April 9, 1958  
Card 2/3

31534  
S/627/60/002/000/017/027  
D299/D304

3.24/0 (2105, 2705, 1559)

AUTHOR: Krasil'nikov, D. D.

TITLE: On some properties of extensive air showers determined from continuous recording of their intensity near sea level

SOURCE: International Conference on Cosmic Radiation. Moscow, 1959. Trudy. v. 2. Shirokiye atmosferynye livni i kas-kadnyye protsessy, 205-211

TEXT: The experiments were conducted at Yakutsk (100 m above sea level), starting in 1958. The time variations of shower intensity were recorded by an apparatus incorporating 360 Geiger-Müller counters. The apparatus is described in brief and some of the results of data-processing are given. The counters were grouped at 4 observation points, at the corners of a square whose side was 57 m long. In calculating the number spectra of the showers, the following notations were used: The lateral distribution function  $\varphi(r)$  ( $r$  being the distance in meters from the shower axis); the differential num-

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31534  
S/627/60/002/000/017/027  
D299/D304

On some properties of ...

ber-spectrum  $K(N)dN$ ; the angular distribution of shower axes  $\cos \theta$ ; the expected number of  $n$ -tuple coincidences between groups of counters of equal area  $\sigma$ , viz.  $C(n, \sigma)$ ; as the mean number of particles  $\bar{N}$ , it is convenient to take the effective value  $N = N_{\text{eff}}$ , determined by

+

$$\int_0^{N_{\text{eff}}} R(N, n, \sigma) dN = \int_{N_{\text{eff}}}^{\infty} R(N, n, \sigma) dN = \frac{1}{2} C(n, \sigma) \quad (5)$$

where  $R$  denotes the differential particle spectrum. It was found that if the distribution function  $\varphi(r)$  does not change with showers of different  $N$ , then the usually adopted spectrum (at sea level) is an overestimate (by a factor of approximately 1.5) of shower intensity not only for  $6 \cdot 10^5 < N < 4 \cdot 10^6$ , but for all  $N \geq 10^5$ . The observed

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S/627/60/002/000/017/027  
D299/D304

On some properties of ...

intensities could best be described by a power spectrum consisting of two parts, with exponent  $\alpha \approx 1.4$  for  $N < 10^5$ , and  $\alpha \approx 1.7$  for  $N > 10^5$ . Fig. 5 shows the dependence of the barometer coefficient on the number of particles. The results led to the following conclusions: The barometer effect yields an absorption length  $\lambda = 1/\mu_N < 180 \text{ gm/cm}^2$  instead of  $\lambda \approx 200 \text{ gm/cm}^2$  as measured by another investigator. Thus the barometer effect does not amount to pure absorption. The discrepancy may be due to the state of the upper atmospheric layers and unstable particles. With increasing  $N$ , the absorption coefficient  $\mu_N$  shows an increasing tendency (for  $N > 10^5$ ) which is in direct contradiction to G. Cocconi's results (Ref. 7: Handbuch der Physik, 1958). Hence it follows that the increase in  $\alpha$  (for  $N > 10^5$ ) is partly related to the increase in  $\mu_N$ . The correlation coefficients and temperature-effect coefficients are listed in a table. The correlation coefficients and temperature coefficients were found to be smaller than expected. The following conclusions were reached: The temperature effect changes sign on increasing the distance between the groups of counters which agrees with earlier

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On some properties of ...

31534  
S/627/60/002/000/017/027  
D299/d304

measurements. The shower intensity at sea level is considerably affected by conditions in the upper atmosphere which may be also due to unstable particles. The author expresses his thanks to the team of scientists who assisted him: S. I. Nikol'skiy, N. N. Yefimov, M. A. Nifontov, V. A. Orlov, E. K. Shamsutdinova, T. F. Panfilova. There are 6 figures, 1 table and 18 references: 11 Soviet-bloc and 7 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: G. Clark, J. Earl, J. Kraushaar, J. Linsley, B. Rossi, F. Scherb. Nature, 180, 406, 1957; A. Dandin, J. Dandin, J. Atm. Terr. Phys., 3, 245, 1953; A. L. Hodson, Proc. Phys. Soc., A 66, 49, 1953; T. E. Cranshaw. Proc. Oxford Conference, April 1956.

ASSOCIATION: Yakutskiy filial Sibirskogo otdeleniya AN SSSR, Laboratoriya kosmicheskikh luchey (Yakutsk branch of the Siberian Section of the AS USSR, Cosmic-Ray Laboratory, Yakutsk)

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KRASILNIKOV D. D.

*DIURNAL*

"DIURNAL VARIATIONS OF COSMIC RAY INTENSITY WITH ENERGY  $\bar{E}$ .  $10^{14} + 10^{17}$  ev.

D. D. Krasilnikov

In order to determine the diurnal cosmic ray intensity variations at very high energies, use is made of extensive data in the form of continuous recordings on the EAS rate, made by the author in 1958 in Yakutsk (100 m above sea level).

Sidereal and solar day EAS rate variations of 8 different average values, corresponding to primary particle energies from  $\bar{E} \sim 10^{14}$  to  $\bar{E} \sim 10^{17}$  ev, are examined. The average rate observed per hour of recording varied within the limits from 1,200 for  $\bar{E} \sim 10^{14}$  ev to 0.7 for  $\bar{E} \sim 10^{17}$  ev.

The influence of the daily course of air pressure and temperature over the point of observation was taken into consideration in the observed daily course of the EAS rate.

report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

This study carried out at the Yakutsk Branch of the Siberian ~~Acad~~ Affil, Acad. Sci. USSR, Cosmic Ray Laboratory, Yakutsk,

Proceedings of Conference publ. Moscow, 1960, Vol. 4, Variations of Cosmic Ray Intensity. p. 365

3.24/0

S/169/61/000/005/022/049  
A005/A130

AUTHOR: Krasil'nikov, D.D.

TITLE: Apparatus for recording time variations in frequency of wide atmospheric showers by means of Geiger-Müller counter pickups

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1961, 11, abstract 5 G 92. (Tr. Yakutskogo fil. AN SSSR. Ser. fiz., 1960, no. 3, 22-39)

TEXT: The author describes the design and main characteristics of equipment intended for continuous recording of wide atmospheric cosmic ray showers. The showers were recorded by Geiger-Müller counters (ГC-60 (GS-60)-type). The counters were placed in four buildings situated at the corners of a square with sides 57 m long. In addition, each building housed three individual devices with triple coincidences with areas of 0.17, 0.5 and 1.0 m<sup>2</sup>. Preliminary results on the meteorological effects of shower frequency and on the shower spectrum at sea level were obtained. [Abstractor's note: Complete translation.]

Card 1/1

✓B

S/169/61/000/005/026/049  
A005/A130

AUTHOR: Krasil'nikov, D.D.

TITLE: The barometric effect of wide atmospheric showers

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1961, 12, abstract 5  
G 96. (Tr. Yakutskogo fil. AN SSSR. Ser. fiz., 1960, no. 3,  
65-73)

TEXT: The author studied the meteorological effects of the frequency of wide atmospheric cosmic ray showers on the basis of recording data obtained in Yakutsk for 1958. He shows that the effect on shower frequency of temperature variation in the atmospheric layer near the ground is very weakly expressed; the temperature coefficient  $\alpha_T$  is close to zero though apparently  $\alpha_T < 0$ . The barometric coefficient  $\alpha_h$  for showers with a particle number  $N \approx 10^5$  is close to - 10% per cm Hg and increases substantially for showers with  $N > 10^5$ . At the same time a disagreement between theoretically expected and experimentally obtained variations of  $\alpha_p$  with  $N$  is

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The barometric effect of wide atmospheric ...

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A005/A130

noted. From this the author concludes that for showers with  $N \approx 10^5$  the absorption of particles in the shower increases with  $N$ .

N. Kaminer

[Abstractor's note: Complete translation.]

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Card 2/2

KRASIL'NIKOV, D.D., YEFIMOV, M.N., NIFONT'V, M.A., AND SHANSUTDINOVA, F.K.

"Size Spectrum of Extensive Air Showers at Sea-Level,"  
report presented at the Intl. Conference on Cosmic Rays and  
Earth Storms, Kyoto, Japan, 4-15 Sept 1961.

KRASIL'NIKOV, D.D.,

"Large Bursts under 10.5 cm pb in a High Pressure  
Ionization Chamber,"

report presented at the Intl. Conference on Cosmic Rays and  
Earth Storms, Kyoto, Japan, 4-15 Sept 1961.

KRASIL'NIKOV, N.D., YEFIMOV, N.N., NIFONTOV, M.A., and SHAMSUTDINOVA, F.K.

"Atmospheric Effects on the Frequency of Extensive Air Showers  
of Various Sizes,"

report presented at the Intl. Conference on Cosmic Rays and  
Earth Storms, Kyoto, Japan, 4-15 Sept 1961.

S/169/62/000/005/070/093  
D228/D307

3.24/10  
AUTHORS:

Kuz'min, A. I., Yefimov, N. N., Krasil'nikov, D. D.,  
Skripin, G. V., Sokolov, V. D., Shafer, G. V. and  
Shafer, Yu. G.

TITLE:

Investigating the time variations of different cosmic  
ray components from observations at one point

PERIODICAL:

Referativnyy zhurnal, Geofizika, no. 5, 1962, 10, ab-  
stract 5G80 (V sb. Kosmicheskiye luchy, no. 3, M.,  
AN SSSR, 1961, 64-79)

TEXT: The recording apparatus complex of the Yakutsk cosmic ray  
station is described, and the main results of the study of the in-  
tensity variations are cited. A neutron monitor, two shielded  
ionization chambers, and metering telescopes, recording the ver-  
tical and the inclined components of cosmic rays, are located on  
the ground surface. In addition, metering telescopes situated at  
depths of 7, 20, and 60 m v.e. [Abstracter's note: Meaning not  
clear] allow the  $\mu$ -meson component to be recorded in the energy

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Investigating the time ...

S/169/62/000/005/070/093  
D228/D307

interval  $2 \times 10^9 - 10^{11}$  ev; finally, the continuous recording of the frequency of latitudinal atmospheric showers gives information about particles with energies of  $5 \times 10^{13} - 10^{16}$  ev. The values of the barometric coefficients of different components are cited, as are the main results of the investigation of the 27-day and the solar-diurnal variations in the intensity. The effects, observed in cosmic rays at the time of geomagnetic storms, are briefly described. The coefficients of the relation between the intensity variations of the first and second components of cosmic rays up to energies of  $\sim 700$  Bev. were determined. The relation's coefficients were used to analyze certain types of intensity variations. 28 references. [Abstracter's note: Complete translation.]

Card 2/2

KRASIL'NIKOV, D.D.; YFIMOV, N.N.; NIFONTOV, M.A.; ORLOV, V.A.

Relation between the intensity of the ionization burst  
and the shower intensity in high-pressure chambers.  
Trudy IAFAN SSSR. Ser. fiz. no.4:15-18 '62. (MIRA 15:12)  
(Ionization) (Cosmic rays)

S/048/62/026/006/017/020  
B125/B102

AUTHOR: Krasil'nikov, D. D.

TITLE: The spectrum of muons at sea level and the mechanism of their production in an energy range of  $E_{\mu} \approx 10^{11}$  ev

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 6, 1962, 818-822

TEXT: The determination of the spectrum from ionization bursts at sea level caused by muons is reviewed. These ionization bursts were measured in high-pressure chambers in the Soviet Union and abroad. The authors base their work on the results obtained at Cheltenham and Kuanghaio, using completely identical chambers, between 1942 and 1945. The integral collision spectra in these two places can be described by

$$b(>n_{Pb})_{Huan} = (1,0 \pm 0,03) n_{Pb}^{-2,2 \pm 0,04} \text{ cm}^{-2} \text{ cer}^{-1}$$

$$b(>n_{Pb})_{Chel} = (14,4 \pm 0,6) \cdot 10^{-2} n_{Pb}^{-2,2 \pm 0,04} \text{ cm}^{-2} \text{ cer}^{-1}$$

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The spectrum of muons at sea ...

S/048/62/026/006/017/020  
B125/B102

The errors stated are statistical. Burst frequencies measured in Kuanghaio were  $7.0 \pm 0.5$  times as great as those in Cheltenham. From these data

$\tau_{\text{Chel}}^{\mu} = 60_{-1}^{+5} \%$  is obtained for the muon component in the bursts. The spectrum averaged over all chambers has the form:  $b(> n_{\text{pb}}) = A n_{\text{pb}}^{-\gamma'}$  with  $A = (2.3 \pm 0.4) \cdot 10^{-2}$ ,  $\gamma' = 2.08 \pm 0.08$ . If the spectrum of vertical intensity has an exponential form at sea level with  $\gamma = 2.1$  if  $10^{11} \text{ ev} < E_{\mu} < 10^{12} \text{ ev}$  and  $\gamma = 2.2$  if  $E_{\mu} > 10^{12} \text{ ev}$ , a considerable muon component results from direct production events. The experimental data can also be explained by the production of muons in  $\pi \rightarrow \mu$  decays and by a muon spectrum with  $\gamma = 2.4$ . There are 3 figures.

ASSOCIATION: Yakutskiy filial SO AN SSSR, Laboratoriya fizicheskikh problem (Yakutsk Branch SO AS USSR, Laboratory of Physical Problems)

Card 2/2

S/048/62/026/006/018/020  
B125/B102

AUTHORS: Krasil'nikov, D. D., Yefimov, N. N., Nifontov, M. A., and  
Shamsutdinova, F. K.

TITLE: Continuation of the investigation into the intensity spectrum  
and into the atmospheric effects due to extensive  
atmospheric showers near sea level

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,  
v. 26, no. 6, 1962, 823-830

TEXT: Some results established since 1960 concerning the intensity  
spectrum and the atmospheric frequency effects due to extensive  
atmospheric showers of various intensities are reviewed. The function  
 $\psi(r)$  of the shower particle distribution not dependent on the intensity is  
assumed to be

$\psi(r) = 1.84 \cdot 10^{-3} r^{-1}$  for  $r < 10$  m,  $\psi(r) = 2.21 \cdot 10^{-3} r^{-1} \exp(-r/55)$  for  
 $10 < r < 100$  m, and  $\psi(r) = 0.57 r^{-2.6}$  for  $r > 100$  m. The spectrum of vertical  
intensity at sea level  $K(N)dN \sim N^{-\alpha-1}dN$ ,  $\alpha = 1.4$  with a particle number

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B125/B1C2

Continuation of the investigation ...

$N < 2 \cdot 10^{15}$  and  $\kappa = 1.7$  for  $N > 2 \cdot 10^5$ , is expressed in exponential form on the basis of earlier results and further experimental comparison. This spectrum agrees satisfactorily with the experimental results for ranges between 3.8 and 80 m and with the areas  $\sigma = 1.0, 0.5$  and  $0.17 \text{ m}^2$  covered by the counter groups. It practically proves that  $\psi(r)$  is independent of the shower intensity. The frequency of the extensive atmospheric showers selected according to the method of the n-fold coincidence is represented as

$$C(n, \sigma) = \int_0^\infty K(N) W[N, n, \sigma, \varphi(r, R)] dN,$$

$$W[N, n, \sigma, \varphi(r, R)] = \iint_{(S)} W[N, n', \sigma, \varphi(r, R)] dS$$

The observed variations  $\delta C(n, \sigma)$  can be caused by the changes  $\delta K(N)$  as well as by distortions of the distribution function  $\delta \varphi(r, R)$ .  $\varphi(R)$  is approximated by an exponential function

$$\varphi(r, R) \approx \begin{cases} b_1 r^{-1} e^{-\frac{r}{R}} & (r \leq 100 \text{ m}), \\ b_2 r^{-1.6} & (r > 100 \text{ m}); \end{cases}$$

If corrections for the geometrical effects are considered, the following

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is obtained for the barometric coefficient by variation of  $C(n, \delta)$  with respect to the parameter  $R$  of the function  $\psi(r, R)$  with constant  $K(N)$ :

$$\beta_r = - \frac{2(\kappa - 1) - \alpha}{T} \Big|_{h=\text{const}}$$

The geometrical temperature effect is given by:

$$\alpha_h(n, \sigma)_{\text{внсп}} = \frac{\delta C(n, \sigma) - \alpha_r(n, \sigma) \cdot \delta H}{\delta h} \cdot \frac{100}{C(n, \sigma)}$$

The observed increase in the barometric coefficient with increasing absorption coefficient of the shower particles cannot be explained by an increase of  $\kappa$  with constant absorption coefficient. The present results point to a change of the character of the variations to which extensive atmospheric showers are subject within a range from  $10^{14}$  to  $10^{15}$  ev, due to either the increasing presence of heavy nuclei among the primary particles with  $E_0 \gtrsim 10^{15}$  ev or to a change in the composition of secondary particles. There are 4 figures and 1 table.

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Continuation of the investigation ...

S/048/62/026/006/018/020  
B125/B102

ASSOCIATION: Yakutskiy filial Sibirskogo otdeleniya Akademii nauk SSSR,  
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Laboratory of Physical Problems)

Card 4/4



KRASIL'NIKOV, D.D.; YEFIMOV, N.N.; NIFONTOV, M.A.; SHAMSUTDINOVA, F.K.

Relation between the width ratio and the mean intensity of  
extensive air showers. Trudy IAFAN SSSR. Ser. fiz. no.4:19-21  
'62. (MIRA 15:12)

(Cosmic rays)

KRASIL'NIKOV, D.D.

How to allow for geometric effects in frequency variations  
of extensive air showers near sea level. Trudy IAFAN SSSR.  
Ser. fiz. no.4:51-56 '62. (MIRA 15:17)  
(Cosmic rays)

KUZ'MIN, A.I.; SHAFER, G.V.; SHAFER, Yu.G.; KRASIL'NIKOV, D.D.;  
KRYMSKIY, G.F.; MAMRUKOV, A.P.; SMIRNOV, N.S.; YARIN, V.I.

July 1959 according to data of comprehensive geophysical  
observations at Yakutsk. Trudy IAFAN SSSR. Ser. fiz. no.4:142-156  
'62. (MIRA 15:12)

(Magnetic storms)  
(Cosmic rays)

D. D. KRASILNIKOV

The energy spectrum of cosmic ray muons in the Range  $10^{11}$ -- $10^{13}$ eV at sea level

report submitted for the 8th Intl. Conf. on Cosmic Rays (IUPAP), Jaipur, India,  
2-14 Dec 1963

KRASIL'NIKOV, D.D.; NIKOL'SKIY, S.I.

Continuous recorder of extensive atmospheric showers of cosmic rays.  
Nauch. soob. IAFAN SSSR no.1:68-71 '58. (MIRA 17:1)

KRASHINSKOV, D.D.

Energy spectrum of muons in cosmic rays at sea level at  
energies exceeding  $10^{11}$  ev. Izv. AN SSSR, Ser. Fiz. 28  
no. 11:1814-1856 N 164. (MIRA 17.12)

1. Institut Atomicheskikh Issledovaniy i Astronomii, fakul'tet  
fizikal'skikh nauk otdeleya AN SSSR.

L 1898-66 EWT(1)/FCC/EMA(h) GS/GW

ACCESSION NR: AT5022833

UR/0000/65/000/000/0211/0214

AUTHOR: Krasil'nikov, D. D.

TITLE: Correlation of the frequency of large ionization bursts with the eleven-year solar activity cycle

SOURCE: Vsesoyuznaya soveshchaniye po kosmofizicheskomu napravleniyu issledovaniy kosmicheskikh luchey. 1st, Yakutsk, 1962. Kosmicheskiye luchy i problemy kosmofiziki (Cosmic rays and problems in cosmophysics); trudy soveshchaniya. Novosibirsk, Redisdat sib. otd. AN SSSR, 1965, 211-214

TOPIC TAGS: solar activity curve, ionizing radiation, cosmic ray intensity, mu meson, cosmic radiation energy

ABSTRACT: In an analysis of the frequency of large ionization bursts observed in chambers for the continuous recording of variations in the intensity of the hard component of cosmic rays, unexpectedly large variations (20-30% at sea level and up to 100% at mountain altitude) of this frequency were found which correlated with the eleven-year solar activity cycle. Data of observations for 1937-1946 with an S camera at Huancayo (3350 m above sea level) and for 1954-1960 with an ASK-1-26 camera at Yakutsk (100 m above sea level) were  
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ACCESSION NR: AT5022833

3  
considered. The bursts were produced by both mu-mesons and nuclear-active particles with an energy of  $10^{11}$ - $10^{12}$  ev. The presence of cosmic ray intensity variations associated with the eleven-year solar activity cycle was manifested in the form of corresponding changes in the slope of curves representing the photorecording of  $\Delta I$ , the deviation of total ionization of cosmic rays from its mean value. It is shown that spurious (i.e., instrument-caused) eleven-year variations of the frequency of bursts are possible. However, a considerable part of the variations (particularly those obtained at Huancayo) may be real, although it is not yet known how they can be made to agree with the existing concepts of cosmic ray variations. "I am very grateful to S. I. Nikol'skiy and B. B. Dotsenko for a discussion of the results." Orig. art. has: 2 figures.

ASSOCIATION: Institut kosmofizicheskikh issledovaniy i aeronomii YAF SO AN SSSR  
(Institute of Cosmic Physics Research and Aeronomy, YAF SO AN SSSR)

SUBMITTED: 29Oct64

ENCL: 00

SUB CODE: AA

NO REF SOV: 007

OTHER: 003

*mlr*  
Card 2/2



L 4481-66 ENT(1)/ENT(m)/FCC/T/EWA(H) IJP(5) GW

ACC NR: APS024635

SOURCE CODE: UR/0046/65/029/009/1690/1692

AUTHOR: Vernov, S.N.; Yegorov, T.A.; Yeginov, N.N.; Krasil'nikov, D.D.; Kuz'min, A.I.  
Maksimov, S.V.; Nesterova, N.M.; Nikol'skiy, S.I.; Sleptsov, Ye. I.; Shafer, Yu. G.

ORG: none

TITLE: Plan for a large installation at Yakutsk for study of extensive air showers  
/Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1690-1692

TOPIC TAGS: primary cosmic ray, secondary cosmic ray, extensive air shower, spectral  
energy distribution, cosmic radiation composition, cosmic radiation anisotropy

ABSTRACT: After a discussion of the significance of extensive air showers for the in-  
vestigation of ultrahigh energy primary cosmic rays, the authors briefly describe an  
installation to be completed in the next two or three years near sea level at latitude  
62° N in the Yakutsk region; it is anticipated that the installation will yield infor-  
mation concerning the energy spectrum, composition, and anisotropy of primary cosmic  
rays with energies up to  $10^{20}$  eV. The installation, intended for investigation of ex-  
tensive air showers, will comprise 65 stations spread over an area of 23 km<sup>2</sup>. Each  
station will be equipped with scintillation counters with a total sensitive area of 1  
m<sup>2</sup> or 4 m<sup>2</sup>, and at the central station - 10 m<sup>2</sup>. The total sensitive area of scintil-

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07010: 3

L 4481-56

ACC NR: AP5024635

lation counters in the whole installation will be 204 m<sup>2</sup>. Each station will be equipped with photomultipliers (total cathode area 180 cm<sup>2</sup> at each station) for recording the Cerenkov flash accompanying a shower. In addition, there will be muon detectors with a total sensitive area of 22 m<sup>2</sup>. Pulses will be transmitted from the more remote stations to the central laboratory by radio. It is anticipated that this installation will record  $2 \times 10^5$  showers per year with energies exceeding 10<sup>15</sup> eV and 2 showers per year with energies exceeding 10<sup>20</sup> eV. Orig. art. has: 1 figure and 1 table.

SUB CODE: NP/ SUBM DATE: 00/

ORIG REF: 002/ OTI REF: 008

Card 2/2

L 4409-66 EWT(1)/EWT(m)/FCC/T/EWA(h) IJP(c) GW

ACC NR: AP5024663

SOURCE CODE: UR/0048/65/029/009/1788/1790

AUTHOR: Yegorov, T. A.; Yefimov, N. N.; Krasil'nikov, D. D.; Koryakin, V. P.; Maksimov, S. V.; Sleptsov, I. Ye.

ORG: none

TITLE: Design problems of large scintillation counters with a single photomultiplier

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1788-1790

TOPIC TAGS: scintillation counter, cosmic ray counter, nuclear scintillation counter

ABSTRACT: Scintillator-photomultiplier mutual arrangement and reflector shape are optimized to decrease the influence of particle trajectory location upon photomultiplier output and to improve reliability of registration of low-density cosmic ray particles. In the experimental arrangement (Fig. 1), a 50 x 50 x 5 cm plastic scintillator occupied only one quadrant of the 100 x 100 cm reflecting container base. A single FEU-44 photomultiplier was used with its axis along the axis of the container. A diffusely reflecting Wattman paper (a high-grade Bristol drafting board) was used as the reflecting surface covering. The location of particle trajectories was determined by a telescope system using SI-5G counters. The area of the scintillator was divided into 16 equal areas 12 x 12 cm, and selections were made of vertical trajectory particle passages within a solid angle of .014 sterad. Arrangement

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L 1409-66

ACC NR: AP5024663

IV, in Fig. 1, was found to be best, giving only about 20% attenuation for signals

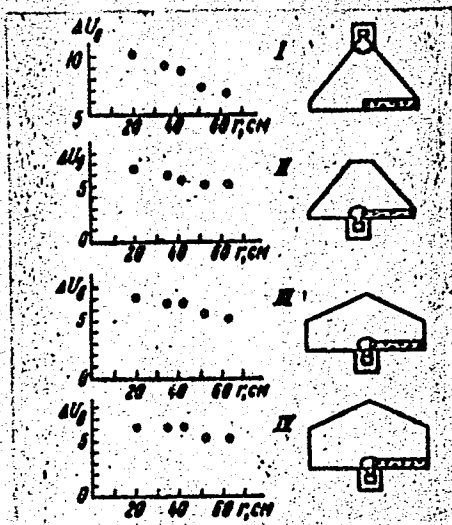


Fig. 1. Dependence of probable pulse height on trajectory of a single particle through the scintillator for various shapes of the reflecting container

arriving from scintillator edges. This should permit registration of a single cosmic ray particle with high reliability. Orig. art. has: 2 figures. [18]

SUB CODE: / SUBM DATE: none/ ORIG REF: 001/ OTH REF: 000/ ATD PRESS 4/25  
Cor 2/2

KRASILNIKOVA I

U S S R .

Needles of the Himalayan cedar as a source of vitamin C. M. P. Pyatnitskiy, N. P. Pyatnitskiy, and D. I. Krashinsky. *Uchenye Zapiski Kazanskogo Universiteta. Seriya Fiziko-Matematicheskie Nauki*, 1954, No. 32, 55-58. Needles of the Himalayan cedar possess a pleasant acidic taste, with a weak resin odor, and contain 180-250 mg. % of vitamin C. A prepn. of the needle ext. and the conditions for cultivation of the cedar are described. R. Wierbicki.

KRASIL'NIKOV, D.I.

USSR/Forestry - Dendrology.

K-3

Abstr Jour : Ref Zhur - Biol., No 3, 1958, 19579

Author : Krasil'nikov, D.I.

Inst : -

Title : The Ecology of the Krasnodarskiy Kray Oaks.

Orig Pub : Botan. zh., 1956, 42, No 4, 272-274

Abstract : An ecological characterization of nine types of oak growing in Krasnodarskiy Kray is given, as well information on their geographical distribution. In some instances the distribution areas are broader than had been noted up until now. The growing regions of all nine species are described. It is recommended that *Q. robur* and *Q. petraea* be introduced into the plantings when oak is being grown in the southern areas. In some cases *Q. pubescens* can also be recommended since it is drought resistant and grows well when there is a lot of lime in the soil.

Card 1/1

KRASIL'NIKOV, D.I.

Hartwiss oak (*Quercus Hartwissiana* Stev.). Biul.MOIP.Otd.biol. 61  
no.6:101-104 N-D '56. (MIRA 10:8)  
(CAUCASUS--OAK)

KRASIL'NIKOV, D.I. (Krasnodar)

On the ecology of oaks in Krasnodar Territory. Bot.zhur.42 no.2:272-  
274 F '57. (MIRA 10:3)

(Krasnodar Territory--Oak)



KRASIL'NIKOV, D.I.

Pubescent oak (*Quercus pubescens* Willd.) in the forests of  
the western Caucasus. Bot. zhur. 48 no.5:661-669 My '63.  
(MIRA 17:1)

1. Krasnodarskiy gosudarstvennyy pedagogicheskiv institut.

KRASIL'NIKOV, Fedor Fedorovich; TSAL, K.I., nauchnyy redaktor; KAMOLOVA,  
V.M., tekhnicheskly redaktor

[Electric repairs on launches] Elektromontazhnye raboty na katerakh.  
Leningrad, Gos. soizusnoe izd-vo sudostroit. promyshl., 1956. 152 p.  
(Launches) (MIRA 9:8)  
(Electric engineering)

KRASIL'NIKOV, Fedor Fedorovich; YERETSKIY, A.A., retsenzent; SLEZIN, N.M.,  
nauchnyy red.; APTEKMAN, M.A., red.; FRUMKIN, P.S., tekhn. red.

[Installation of electric lighting equipment on ships] Montazh sudovogo osvetitel'nogo elektrooborudovaniia. Leningrad, Gos. soiznaoe izd-vo sudostroit. promyshl., 1961. 143 p. (MIRA 14:8)  
(Ships—Electric lighting)

KRASIL'NIKOV, Fedor Fedorovich; BOGACHENKO, V.Ye., red.; ANDREYEVA,  
~~E.S., Fed. Izd-va; TIKHONOVA, Ye.A., tekhn. red.~~

[Manual on the repair and installation of electrical equip-  
ment on ships] Posobie po remontu i montazu sudovogo elek-  
trooborudovaniia. Moskva, Izd-vo "Morskoi transport, 1963.  
198 p. (MIRA 16:8)

(Electricity on ships)